

### **Abstract of the Disclosure**

The invention is for controlling execute-in-place in a serial flash memory and a flash memory chip using the same, enabling a serial flash controller with predetermined amount of storage to access the serial flash, to read an entire page to which required data belong, and to transmit the desired data to a main control unit or to execute the data. The apparatus includes a cache module for accessing a designated memory address of the serial flash in response to a command received from a main control unit, and reading or writing data required by the main control unit; a serial flash controller with a boot loader for allowing system booting to be performed by reading boot codes written on the serial flash, and storing the boot codes in a buffer and immediately transmitting the boot codes to the main control unit when the main control unit requires the boot codes.